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Listing of the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently amended) A method to selectively produce para-hydroxybenzoic acid in plant stem tissue comprising:
 - a. growing a plant under suitable conditions, the plant comprising
 - i. an endogenous source of para-coumaroyl-CoA; and
 - ii. at least one 4-hydroxycinnamoyl-CoA hydratase/lyase (HCHL) expression cassette comprising a nucleic acid molecule encoding a polypeptide having hydroxycinnamoyl CoA hydratase/lyase activity, wherein said nucleic acid molecule is selected from the group consisting of SEQ ID NOs: 5, 58, 59, 60, 62, 63, and 64:
 - (a) a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 5, 58, 59, 60, 62, 63, and 64; and
 - (b) a nucleic acid molecule encoding a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 6 and SEQ ID NO: 61;
 - b. recovering unconjugated para-hydroxybenzoic acid and para-hydroxybenzoic acid glucoside from the plant;
 - c. hydrolyzing para-hydroxybenzoic acid glucoside; and
 - d. recovering unconjugated para-hydroxybenzoic acid.
2. (original) The method according to Claim 1 wherein the plant is selected from the group consisting of tobacco, *Arabidopsis*, sugar beet, sugar cane, soybean, rapeseed, sunflower, cotton, corn, alfalfa, wheat, barley, oats, sorghum, rice, canola, millet, beans, peas, rye, flax, and forage grasses.
3. Cancelled.
4. Cancelled.

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5. (Previously presented) A method according to Claim 1 wherein the HCHL expression cassette is SEQ ID NO:30.
6. Cancelled.
7. Cancelled.
8. Cancelled.
9. (Previously presented) A method according to Claim 1 wherein the nucleic acid molecule encoding HCHL encodes the polypeptide of SEQ ID 61.
10. Cancelled.
11. (Previously presented) A method according to Claim 1 wherein the nucleic acid molecule encoding HCHL encodes the polypeptide of SEQ ID NO:6.
12. Cancelled.
13. Cancelled.
14. (Currently amended) A method according to Claim 1 wherein the plant further comprises at least one nucleic acid molecule encoding a polypeptide having UDP-glucosyltransferase activity, said at least one nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 65, 66, and 67; wherein said at least one nucleic acid molecule is operably linked to a suitable regulatory sequence.
15. Cancelled.
16. (original) The method according to Claim 1 wherein the tissue-specific promoter of said HCHL expression cassette preferentially expresses active HCHL in said plant stem tissue at levels at least ten times higher than expression levels measured in leaf tissue of said plant.
17. (Previously presented) A method to selectively produce para-hydroxybenzoic acid in plant stem tissue comprising:
 - a. providing a plant comprising

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- i. an endogenous source of para-coumaroyl-CoA;
 - ii. a 4-hydroxycinnamoyl-CoA hydratase/lyase (HCHL) expression cassette comprising a tissue-specific promoter selected from the group consisting of SEQ ID NOs: 26, 43, 44, 45, 46, 49, 81, 82, and 83 operably linked to a nucleic acid molecule encoding a polypeptide having hydroxycinnamoyl CoA hydratase/lyase activity having an amino acid sequence SEQ ID NO: 61; and
 - b. growing a plant under suitable conditions whereby unconjugated para-hydroxybenzoic acid and para-hydroxybenzoic acid glucosides are produced;
 - c. recovering unconjugated para-hydroxybenzoic acid and para-hydroxybenzoic acid glucoside from the plant;
 - d. hydrolyzing para-hydroxybenzoic acid glucoside; and
 - e. recovering unconjugated para-hydroxybenzoic acid.
18. Cancelled.
19. (original) The method according to Claim 17 wherein the plant is selected from the group consisting of tobacco, *Arabidopsis*, sugar beet, sugar cane, soybean, rapeseed, sunflower, cotton, corn, alfalfa, wheat, barley, oats, sorghum, rice, canola, millet, beans, peas, rye, flax, and forage grasses.
20. Cancelled.
21. Cancelled.
22. Cancelled.
23. (Currently amended) A method according to Claim 17 wherein the plant further comprises at least one nucleic acid molecule encoding a polypeptide having UDP-glucosyltransferase activity, said nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 65, 66, and 67; wherein said at least one nucleic acid molecule is operably linked to a suitable regulatory sequence.
24. Cancelled.